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UTILITY PATENT APPLICATION

Attori	ney Docket No.	8021-164 (SS-17835-US)			
First Inventor		Sung-Taeg Kang			
Title NON-VOLATII		LE MEMORY DEVICE HAVING.			
_		EV32048873311S			

IRA	NSMITTAL	itle NON-VOLATILE	MEMORY DEV	ICE HAVING	
(Only for new nonprovisio	nal applications under 37 CFR 1.53(b))	Express Mail Label No. EV329488733US			
•	ATION ELEMENTS cerning utility patent application contents.	ADDRESS TO: BO	ssistant Commiss ox Patent Applica /ashington, DC 20	tion E	
1. See Transmittal F (Submit an original and a Applicant claims see 37 CFR 1.27 3. Specification (preferred arrangemer - Descriptive title - Cross Reference - Statement Reg - Reference to so or a computer - Background of - Brief Summary - Brief Descriptic - Detailed Descriptic - Claim(s) - Abstract of the	form (e.g., PTO/SB/17) duplicate for fee processing) small entity status. [Total Pages 17] of the invention set to Related Applications arding Fed sponsored R & D equence listing, a table, program listing appendix the Invention of the Invention of the Drawings (if filed) intition Disclosure	7. CD-ROM or CD-F Computer Progra 8. Nucleotide and/or Amino (if applicable, all necess: a. Computer Read b. Specification Sequen i. CD-ROM ii. paper c. Statements veri ACCOMPANYING 9. Assignment Pap 10. (when there is a	R in duplicate, larger (Appendix) Acid Sequence Sary) able Form (CRF) ce Listing on: If or CD-R (2 copie) frying identity of at CAPPLICATION COVERS (COVER SHEET & COVER STATEMENT)	e table or Submission es); or pove copies ON PARTS document(s)) Power of Attorney	
b. Copy from a (for continue i. DELET Signed st named in 1.63(d)(2)	[Total Sheets 2] [Total Pages 2] uted (original or copy) a prior application (37 CFR 1.63 (d)) ation/divisional with Box 18 completed) TON OF INVENTOR(S) atement attached deleting inventor(s) the prior application, see 37 CFR and 1.33(b).	12. Information Disc Statement (IDS) 13. Preliminary Ame 14. Return Receipt (Should be spec (if foreign priorit) 16. Request and Co (b)(2)(B)(i). App or its equivalent	losure /PTO-1449 endment Postcard (MPEP iffically itemized) of Pnority Docume y is claimed) ertification under 3 licant must attach	Copies of IDS Citations 503)	
or in an Application Data Sh Continuation Prior application information: For CONTINUATION OR DIVIS Box 5b. is considered a part of	ICATION, check appropriate box, and supeet under 37 CFR 1.76: Divisional Continuation-in-part (CIP) Examiner IONAL APPS only: The entire disclosure of the disclosure of the accompanying continuation in the relied upon when a portion has been inadvented.	of prior application No.: Group Art Unit: prior application, from which an ion or divisional application and tily omitted from the submitted	oath or declaratio	n is supplied under	
Customer Number or Bar C	ode Label finsert Customer No. or Attach i	or V	Correspondence a	address below	
Name	Frank Chau				
Address	F. CHAU & ASSOCIATES, LLP 1900 Hempstead Turnpike, Suite 50				
City	East Meadow	State New York	Zip Code	 	
Country	U.S.A Te	hone (516) 357-0091	Fax	(516) 357-0092	
Name (Print/Type)	Michael F. Morano	Registration No. (Attorr	ney/Agent) 44,9	52	
Signature	Michael F. moras		Date July	24, 2003	



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. Compl te if Kn wn **FEE TRANSMITTAL** Application Number Filing Date for FY 2003 Sung-Taeg Kang First Named Inventor Effective 01/01/2003. Patent fees are subject to annual revision. **Examiner Name** Applicant claims small entity status. See 37 CFR 1.27 Art Unit (\$) 826.00 8021-164 (SS-17835-US) TOTAL AMOUNT OF PAYMENT Attorney Docket No. FEE CALCULATION (continued) METHOD OF PAYMENT (check all that apply) 3. ADDITIONAL FEES Money Check Credit card Other None Large Entity , Small Entity Deposit Account: Fee Fee Fee **Fee Description** Fee Paid Code (\$) Code Deposit Account 2051 65 Surcharge - late filing fee or oath 130 1051 Number Surcharge - late provisional filing fee or 2052 25 Deposit 1052 50 F. Chau & Associates, LLP cover sheet Non-English specification Name 130 1053 130 1053 The Commissioner is authorized to: (check all that apply) 1812 2,520 For filing a request for ex parte reexamination 1812 2,520 Credit any overpayments Charge fee(s) indicated below 920* Requesting publication of SIR prior to 1804 920 1804 Charge any additional fee(s) during the pendency of this application **Examiner action** Requesting publication of SIR after Examiner action Charge fee(s) indicated below, except for the filing fee 1805 1.840 1805 1.840* to the above-identified deposit account Extension for reply within first month 1251 110 2251 **FEE CALCULATION** Extension for reply within second month 410 2252 205 1252 1. BASIC FILING FEE 930 2253 465 Extension for reply within third month 1253 arge Entity Small Entity Fee Description Fee Paid 2254 725 Extension for reply within fourth month 1.450 1254 Code (\$) code (\$) Extension for reply within fifth month 1.970 2255 1255 Utility filing fee 2001 375 1001 750 750.00 320 2401 160 Notice of Appeal 1401 2002 165 Design filing fee 1002 330 160 Filing a brief in support of an appeal 2402 1402 320 2003 260 Plant filing fee 1003 520 140 Request for oral hearing 2403 1403 280 2004 375 Reissue filing fee 1004 750 1451 1,510 1451 1,510 Petition to institute a public use proceeding Provisional filing fee 2005 80 1005 160 55 Petition to revive - unavoidable 1452 110 2452 SUBTOTAL (1) (\$) 750.00 2453 650 Petition to revive - unintentional 1453 1,300 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE 650 Utility issue fee (or reissue) 1501 1,300 2501 Fee Paid 2502 235 Design issue fee Extra Claims 1502 470 below 36 x 18 **Total Claims** -20** = 1503 630 2503 315 Plant issue fee Independent 84 40 3 Х 130 1460 130 Petitions to the Commissioner 1460 Multiple Dependent 50 Processing fee under 37 CFR 1.17(q) 1807 1807 50 180 Submission of Information Disclosure Stmt Large Entity **Small Entity** 1806 180 1806 40 Recording each patent assignment per Fee Description Fee Fee 40.00 8021 40 8021 Code (\$) Code (\$) property (times number of properties) Claims in excess of 20 375 Filing a submission after final rejection (37 CFR 1.129(a)) 1202 18 2202 9 1809 750 2809 Independent claims in excess of 3 1201 84 2201 42 375 For each additional invention to be Multiple dependent claim, if not paid 1810 750 2810 2203 140 1203 280 examined (37 CFR 1.129(b)) ** Reissue independent claims 2204 42 1204 84 375 Request for Continued Examination (RCE) 2801 1801 750 over original patent 900 Request for expedited examination 1802 1802 900 ** Reissue claims in excess of 20 2205 9 1205 18 of a design application and over original patent Other fee (specify) [(\$) 36.00 SUBTOTAL (2) *Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) 40.00 **or number previously paid, if greater; For Reissues, see above (Complete (if applicable) SUBMITTED BY Registration No. Telephone 516-357-0091 44,952 Michael F. Morano Name (Print/Type) mora July 24, 2003 Date mida Signature

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This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

Atty. Docket No. 8021-164 (SS-17835-US)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

UTILITY APPLICATION FEE TRANSMITTAL

	STELL AT EIGHT EE HAROWITAE			
Sir:				
Transmitted	herewith for filing is the patent application of			
Inventor(s):	Sung-Taeg KANG			
For:	NON-VOLATILE MEMORY DEVICE HAVING IMPROVED PROGRAMMING AND ERASING CHARACTERISTICS AND METHOD OF FABRICATING THE SAME			
Enclosed are	ə:			
[X] <u>12</u>	page(s) of specification			
[X] <u>1</u>	page(s) of Abstract			
[X] <u>4</u>	page(s) of claims			
[X] <u>4</u>	sheets of drawings [X] formal [] informal			
[X] <u>2</u>	page(s) of Declaration and Power of Attorney			
[X] An Assignment of the invention to <u>Samsung Electronics Co., Ltd.</u>				
	CERTIFICATION UNDER 37 C.F.R. § 1.10			
Service on this date	is New Application Transmittal and the documents referred to as enclosed therein are being deposited with the United States Postal July 24, 2003 in an envelope as "Express Mail Post Office to Addressee" Mail Label Number EV329488733US addressed to: tents, P.O. Box 1450, Alexandria, VA 22313-1450, Mail Stop Patent Application.			

Michael F. Morano
(Type or print name of person mailing paper)

M. L. H. M. W. W.
(Signature of person mailing paper)

IJ	[] This application claims the benefit under 35 U.S.C §119(e) of U.S. Provisional Application(s) No(s).:							
	APPLICATIO		F	ILING DATE				
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[X]	[X] Certified copy of applications							
<u>Co</u>	Country Applr		No.		<u>Filed</u>			
<u>Ko</u>	rea	2002/5662	September 17, 2002					
	[] will follow.	LATION OF UTI	LITY APP	LICATION	N FEE			
	For	Number Filed	Number Extra	Rate	Basic Fee \$750.00			
			Extra		\$750.00			
	For TOTAL CLAIMS INDEPENDENT CLAIMS	Number Filed 22 3	1	x 18 = x 84 =				
-	TOTAL CLAIMS INDEPENDENT	22	Extra 2	x 18 =	\$750.00 \$36.00			
-	TOTAL CLAIMS INDEPENDENT CLAIMS [] Multiple Dep.	22	Extra 2	x 18 = x 84 = 280	\$750.00 \$36.00 \$0			

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- [] The amount of \$40.00 for recording the attached Assignment is enclosed as a separate check.
- [X] Please charge fee of \$40.00 for recording the attached assignment by Credit Card Payment Form PTO-2038 enclosed herewith.
- [X] Please charge fee of \$786.00 to cover the filing fee by Credit Card Payment Form PTO-2038 enclosed herewith.
- [X] Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. § 1.16 and 1.17, at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account No. 50-0679. Also, in the event any extensions of time for responding are required for the pending application(s), please treat this paper as a petition to extend the time as required and charge Deposit Account No. 50-0679 therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

Date: July 24, 2003

Michael F. Morano Reg. No. 44,952

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